

Dual Circular Polarized Lens Horn Antenna

8 to 110 GHz, 30 dB Directivity

DESCRIPTION

Anteral's Dual Circular Polarized Lens Horn Antennas (DCPLHA) are an integrated system composed of an **orthomode transducer (OMT)** that provides high isolation and cross-polarization (XP) cancellation, a **high performance polarizer (POL)** and a **conical lens horn antenna**. The antenna has a plano-convex Teflon (PTFE) lens added in the aperture, in order to apply phase correction and achieve high gain, low VSWR and low side-lobes, with minimum size.

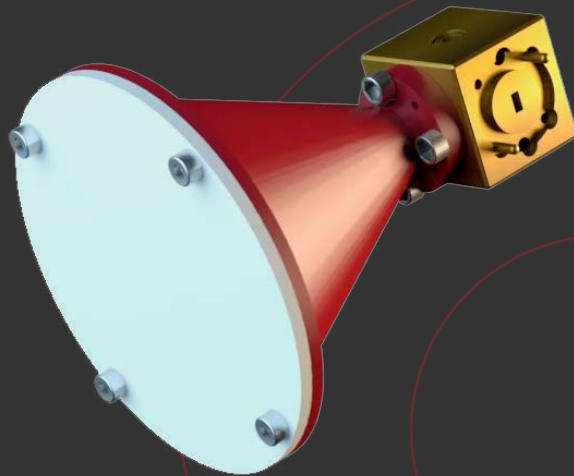
They are designed to cover the frequency range of 8 to 110 GHz in 12 bands with 30 dBi nominal mid-band gain and a typical VSWR of 1.25. The OMT and POL combination supports both RHCP and LHCP signals with less than 1 dB axial ratio.

Besides, custom bands and gain values can be requested. Anteral offers LHAs with linear or circular polarization.

APPLICATIONS

Dual Polarized Lens Horn Antennas are especially useful when high gain is required with the minimum size. Therefore, these antennas are widely used in radar applications, communication links and meteorological systems, among others.

New cutting-edge space applications include LHA's for MiniSat, MicroSat, NanoSat and CubeSat communications.

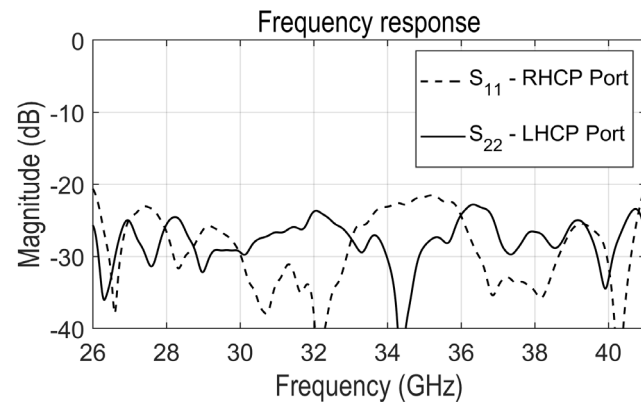
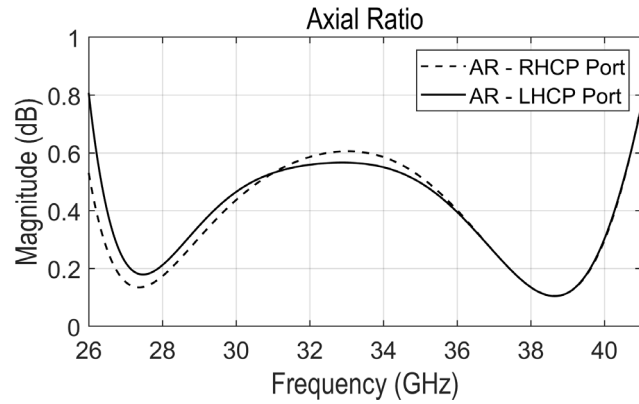


ELECTRICAL SPECIFICATIONS

Model	Frequency (GHz)	S11 (dB)	Directivity (dBi)	Isolation (dB)	Axial Ratio (dB)
DCPLHA-30-WR90	8.2 - 12.4	-18	30.4	30	0.4
DCPLHA-30-WR75	10 - 15	-18	30.8	30	0.5
DCPLHA-30-WR62	12.4 - 18	-18	31.1	30	0.5
DCPLHA-30-WR51	15 - 22	-18	31.9	30	0.5
DCPLHA-30-WR42	18 - 26.5	-18	31	30	0.6
DCPLHA-30-WR34	22 - 33	-18	30.4	28	0.7
DCPLHA-30-WR28	26.5 - 40	-18	30.8	28	0.7
DCPLHA-30-WR22	33 - 50	-18	30.5	25	0.7
DCPLHA-30-SAT-QV	37.5 - 42.5 47.2 - 52.4	-18	30.5	28	0.4
DCPLHA-30-5G-E	71 - 76 81 - 86	-18	30.2	20	0.8

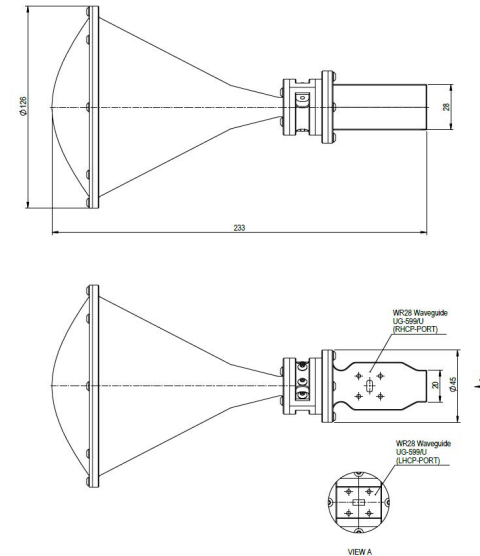
All data are typical values. Contact us for other DCPLHA models and more information.

TYPICAL PERFORMANCE



MECHANICAL OUTLINE

Flange	Standard UG-xxx/U
Operating temperature	-40°C to +85°C
External color	Aluminum. Gold plated in some cases.
Material	Aluminum.
Lens material	PTFE or HDPE depending on the model.



Additional notes

All data are simulated. Typical performance data and mechanical outline correspond to DCPLHA-30-WR28 model. Actual values could vary slightly. The return loss performance of all items is checked before delivery.

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